

Just about every ACC base experiences some type of severe weather each year. Tornadoes, heavy rains that can lead to flooding – including flash floods, storm surges, large hail (3/4 of an inch or larger), lightning, and straight-line winds gusting in excess of 50 knots or 57.5 miles per hour are all potential outcomes of severe thunderstorms and some of the hurricanes that make land-fall. No matter what Mother Nature dishes out, there are safety precautions and preparations all ACC personnel can take to minimize the danger and/or damage.

Weather threats are very real. An average of 800 to 1,000 tornadoes occur each year, resulting in 80 deaths and over 1,500 injuries. Flash floods are responsible for 146 deaths annually. Lightning kills 75 to 100 people each year. Large hail can reach the size of a grapefruit and causes several hundred million dollars in damage annually to property and crops.

As military members we have an obligation to protect our families and homes, as well as our work spaces and equipment. We must also be accountable to our chains of command for our whereabouts during severe weather events. Education and preparation are the keys to saving lives and reducing property damage.

Shortly after arriving at a base, gather information about the weather hazards associated with your local area and the warning signs of each one. Contact your base weather or disaster preparedness shop, the local National Weather Service office, emergency management or civil defense office, or American Red Cross chapter. The Federal Emergency Management Agency (FEMA) and the Department of Homeland Security provide a great deal of information concerning the threat to life and property from natural disasters, how to identify them, how to protect against and prepare for them and the actions you can take after a natural disaster event occurs online at http://www.ready.gov/natural_disasters.html, and <http://www.fema.gov/areyouready/>. You can also find a lot of information on the internet at sites like: <http://iwin.nws.noaa.gov/iwin/nationalwarnings.html>, and <http://nssl.noaa.gov>.

Learn the warning signals and evacuation plans that will be used by

your base and community. It is important to know the name of the county or parish in which you live because that's how watches and warnings are issued. Once you have collected this information, call a family meeting to discuss it and develop a family disaster plan for home, work, school, and outdoor activities.

Designate emergency meeting places. These will be different depending on the emergency. For high wind threats at home (not a mobile home), designate a basement or ground floor interior hallway or room that puts as many walls as possible between you and the outside. Make sure the area is uncluttered, but has a sturdy object such as a heavy table to protect family members from falling objects. Do not choose an area that has windows or glass doors. Always use your arms and hands to protect your head and neck from falling or flying objects. If you live in a high rise, the center hallway is the safest place.

For a mobile home, designate a shelter outside of the home (community shelter, nearby basement or sturdy building) and make sure all family members know to leave immediately. This would also be a good time to designate a meeting area outside the home for an emergency such as a fire, but be sure to distinguish to younger children the difference between safe places (e.g., fire versus tornado).

If you are building a home in "Tornado Alley" or in a high wind or severe weather area that is prone to tornado or hurricane events you may want to consider building a storm shelter inside your home. FEMA provides an information booklet entitled: *"Taking Shelter from the Storm: Building a Safe Room inside Your House"* at <http://www.fema.gov/pdf/fima/fema320.pdf>. The booklet explains that "having a shelter, or a safe room, built into your house can help you protect yourself and your family from injury or death caused by the dangerous forces of extreme winds. It can also relieve some of the anxiety created by the threat of an oncoming tornado or hurricane." Prior to building a shelter in your house, FEMA recommends that you first consider your location (i.e., are you living in a high risk area), how quickly you can reach safe shelter during extreme winds, what level of safety do you want

to provide and cost considerations of building a shelter. The booklet provides construction plans, cost estimates as well as engineering results on the effects of severe winds on building construction conducted by Texas Tech University's Wind Engineering Research Center.

If family members find themselves outside during high wind threats, they need to seek immediate shelter in a nearby basement or sturdy building. If shelter is not available, lie flat in a low-lying area that is not prone to flooding. If you are on the road, do not try to out-drive the threat. Leave your vehicle immediately and seek shelter, but not under overpasses and bridges.

If the threat is lightning, family members should remain in their vehicles. If outside, they need to leave summits of mountains, crests of ridges, slopes above the timberline or large meadows/open spaces. They should descend to a lower elevation, squat down, or kneel down on a pad with your feet close together to minimize contact with the ground, and keep your head low. Dense forest located in a depression provides the best protection. Avoid isolated trees, trees much taller than adjacent trees, shallow caves, overhanging rocks, water, metal fences, and power lines. If in a group, spread out at least 100 feet apart. Follow the "30-30" rule: Take shelter if the time from seeing a flash to the time you hear thunder is 30 seconds or less and don't resume activities until 30 minutes have elapsed from the last lightning and thunder.

For flooding threats, always know where you are and how to get to higher ground. Solitary storms that move through an area in 20 minutes or so do not present a high flash flood threat, however, take note to stay away from natural and man-made drainage areas. Watch for an increase in speed or volume of stream flow and never attempt to cross water that is over knee deep. As little as 6 inches can sweep you off your feet, so don't underestimate the power of moving water. Never drive into water if you don't know exactly how deep the water is. It only takes 18 to 24 inches of water to float most motor vehicles and then the vehicle is out of the driver's control.

Now that you have established where the safe places are and how to get there in a weather emergency, it's time to discuss evacuation plans. Take into

NATURE'S FURY

by Maj Danielle Coleman, Langley AFB, Va.

Courtesy Photo



Photo By: TSgt Ben Bloker

consideration the special needs of your family (e.g., infants, elderly, disabled, and pets) when making your plans. Discuss what everyone’s responsibilities would be in the event that local officials order an evacuation and emphasize the importance of following evacuation orders. Designate primary and secondary evacuation locations outside the threat area. Choose a friend or family member outside of the threat area as a “family-check-in contact” for everyone to call if the family gets separated.

Once you’ve determined what actions your family will take at home, on the road, and outside for the different weather hazards, it’s important to get the same information for family work-places, schools, and day care centers. When your family’s plan is in place, it is imperative that you pass that information onto your supervisor. At a minimum, provide the names of family members who will be evacuating with you, primary and secondary evacuation locations outside of the threat area, “family-check-in contact,” and any additional information that will help the military locate you in the event of an emergency or evacuation. Supervisors, make sure you have this information on all your individuals. A base-generated form is an ideal tool for collecting this information. All military personnel have a responsibility to maintain contact with their chains of command.

Make outdoor preparations. There are many things we can do before a severe weather event to minimize injuries and damages. Look around your yard. Make trees more wind resistant by removing diseased or damaged limbs or, if necessary, remove entire trees. Determine what areas of your home are prone to flooding and prepare enough sandbags to protect them. Secure loose rain gutters and downspouts and try to keep them clean year round. Install permanent shutters on windows and doors -- especially sliding glass doors. As an alternative, you can attach anchors for pre-cut ½ inch plywood boards with pre-drilled holes. Have an engineer check your home and advise you about ways to make it more wind resistant. This can include strengthening garage doors,

Photo Illustration By: SrA Alex Sotak



reinforcing your pre-designated safe room, or even elevating coastal homes. If you live in a manufactured home, re-check and reinforce tie-downs. Finally, make sure your insurance policies are adequate for the weather hazards you might encounter.

Make indoor preparations. Start by posting important emergency phone numbers. Include base numbers that you will use to maintain contact with your chain of command. Inspect your home for potential hazards (i.e., items that can move, fall, break, or catch fire) and correct them. Install safety features such as smoke detectors and fire extinguishers. Assemble 3-day disaster supply kits in sturdy, easy-to-carry containers like backpacks or duffle bags. 🇺🇸

Supplies should include:

- Water (one gallon per person per day)
- One change of clothing and footwear per person
- First-aid kit (include prescription medicines)
- Emergency tools
- NOAA Weather Radio with warning alarm tone and battery back-up
- Portable radio
- Flashlights (one per person; avoid using candles or kerosene lamps)
- Extra batteries
- Extra set of car keys



Photo By: TSgt Bill Kimble

- Credit cards and cash
- Cards, games, books
- Specialty items for infants, elderly, disabled, pets
- Waterproof container for important family documents

It is also a very good idea for each family member to learn basic safety measures (e.g., CPR, first aid, fire extinguisher use, how and when to turn off the water, gas, and electricity in your home). Just remember, if you turn off the gas, it might take a professional to turn it back on which may take several weeks to happen after a disaster. Another time saver is to make a list of things that only need to be done just before a severe weather event occurs.

This would include some of the following items:

- Secure outside items (i.e., lawn furniture, outdoor decorations or ornaments, trash cans, hanging plants, outside antennas, etc.)
- Close and board all windows and doors
- Place sandbags around flood prone areas of your home
- If you own a boat, moor it securely or move it to a designated safe place
- Turn off propane tanks
- Turn refrigerator/freezer to coldest setting

- Unplug appliances that may be affected by power surges as the storm approaches or after power is restored
- Store drinking water in clean bathtubs, sinks, plastic bottles, and cooking utensils (this is usually the greatest need following a disaster)
- Fill car gas tank and a tank for your generator (if you have one)

Maintain your plan. Having a great plan will not serve you and your family well if no one remembers what to do. Have frequent drills. Ask questions about meeting places, phone numbers, and safety rules. Test smoke detectors monthly and change the batteries at least once a year. Test and recharge fire extinguishers according to manufacturer’s instructions. Replace stored water and food every 6 months.

Severe weather is a possibility no matter where you are stationed. Be prepared and plan to be safe!

Resources used to create this article: Talking About Disaster: Guide for Standard Messages by National Disaster Education Coalition, Washington DC, 1999. Websites:

http://cimms.ou.edu/~doswell/tstm_camping_safety.html

<http://www.nssl.noaa.gov/NWSTornado/>

<http://www.education.noaa.gov/cweather.html>



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